

APPROVED BY PLANNING

Planner  
TITLE  
DATE 5-3-18

APPROVED BY FORESTRY

City Forester  
TITLE  
DATE 5-3-18

## WARRANTY / DISCLAIMER

The designs represented in these plans are in accordance with established practices of civil engineering. However, neither Swenson, Hagen & Co. nor its personnel can or do warrant these plans as constructed except in the specific cases where Swenson, Hagen & Co. personnel inspect and control the physical construction on a full time basis.

## SAFETY NOTICE TO CONTRACTOR

In accordance with generally accepted construction practices the contractor will be solely and completely responsible for the conditions of the job site, including safety of all persons and property during performance of the work. This requirement will apply continuously and not be limited to named business hours.

## NOTICE TO CONTRACTOR

The location of existing underground utilities are shown in an approximate way only and have not been independently verified by the owner or its representatives. The Contractor shall determine the exact location of all existing utilities before commencing work, and agree to be fully responsible for any and all damages which might be occasioned by the Contractor's failure to exactly locate and preserve any and all underground utilities.

CALL BEFORE YOU DIG  
NORTH DAKOTA  
UTILITIES UNDERGROUND LOCATION SERVICE  
1-800-795-0555

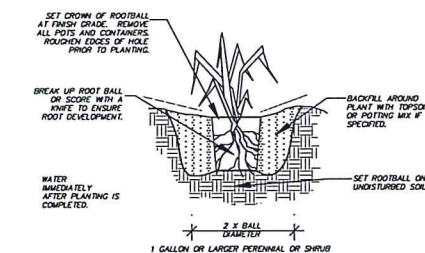
Copyright © 2018 by Swenson, Hagen & Co.  
All rights reserved. No part of this drawing may be used or reproduced in any form or by any means without the express written permission of Swenson, Hagen & Co.

## IRRIGATION PERFORMANCE SPECIFICATION

- CONTRACTOR SHALL DESIGN AND PROVIDE A PRICE FOR AN IRRIGATION SYSTEM ON THIS SITE. WATER CONNECTION SHALL BE BY MECHANICAL.
- SYSTEM SHALL BE DESIGNED FOR 100% HEAD TO HEAD COVERAGE PROVIDING AT LEAST 1" OF MOISTURE PER WEEK. OVERSPRAY SHALL BE MINIMIZED ONTO PAVEMENT, SIDEWALKS, AND BUILDINGS. QUICK COUPLERS SHALL BE PROVIDED FOR WINTERIZATION.
- IRRIGATION CONTRACTOR SHALL MAKE ANY FIELD ADJUSTMENTS NECESSARY TO INSURE THAT THE COVERAGE IS HEAD TO HEAD. ALL CHANGES MUST BE DOCUMENTED. UPON COMPLETION OF THE JOB AN AS BUILT DRAWING INCLUDING PIPE SIZES, VALVE LOCATIONS AND HEAD LOCATIONS MUST BE GIVEN TO THE OWNER OR OWNERS REPRESENTATIVE.
- IRRIGATION CONTRACTOR SHALL FOLLOW ALL RECOMMENDED PRACTICES AS SET FORTH BY THE MANUFACTURER'S SPECIFICATIONS AND THE IRRIGATION ASSOCIATION.
- IRRIGATION CONTRACTOR SHALL INCLUDE THE FIRST YEARS WINTERIZATION IN THE COST OF THE PROJECT.

## IRRIGATION CONDUITS

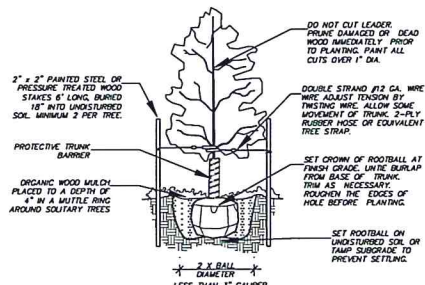
- CONTRACTOR SHALL INSTALL IRRIGATION CONDUITS TWO FEET BELOW FINISH GRADE ACROSS PAVED AREAS TO ISLANDS AND ACROSS DRIVEWAYS. CONDUITS SHALL BE TWICE THE SIZE OF THE LINE BEING INSTALLED. CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS OF CONDUITS WITH MINIMUM TWO DIMENSIONS TO KNOWN SURFACE FEATURES.



## SHRUB/PERENNIAL PLANTING DETAIL

TYPICAL FOR ALL SHRUBS AND PERENNIALS

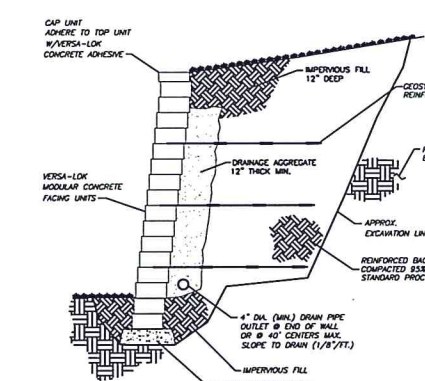
NTS



## TREE PLANTING DETAIL

TYPICAL FOR ALL DECIDUOUS, SINGLE-TRUNK, TREES

NTS



## TYPICAL SECTION-REINFORCED RETAINING WALL

TYPICAL FOR ALL DECIDUOUS, SINGLE-TRUNK, TREES

NTS

## RETAINING WALL NOTES

- REINFORCED RETAINING WALL SHALL BE CONSTRUCTED OF VERSA-LOK STANDARD RETAINING WALL SYSTEM OR AN ENGINEER APPROVED EQUAL. COLOR SHALL BE GRAY AND TEXTURE OF WALL SHALL BE SUBMITTED TO OWNER FOR THEIR APPROVAL.
- RETAINING WALL SHALL HAVE COMPACTED SAND OR GRAVEL BACKFILL WITH IMPERVIOUS FILL MATERIAL AT TOP PORTION OF WALL.
- WALL BASE MATERIAL SHALL BE COMPOSED OF LEVELING PAD THAT CONSISTS OF COMPACTED FINE DRAGGING GRANULAR MATERIAL A MINIMUM OF 6" THICK.
- 4" DRAIN PIPE BEHIND WALL AT BASE SHALL BE INSTALLED TO ALLOW DRAINAGE AWAY FROM THE WALL BASE.
- RETAINING WALL SYSTEM SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
- CONTRACTOR SHALL SUBMIT DETAILED DESIGN CALCULATIONS AND FINAL RETAINING WALL PLANS FOR APPROVAL TWO WEEKS PRIOR TO THE BEGINNING OF WALL CONSTRUCTION. ALL CALCULATIONS AND DRAWINGS SHALL BE PREPARED AND SEALED BY A PROFESSIONAL ENGINEER EXPERIENCED IN SEGMENTED RETAINING WALL DESIGN AND LICENSED IN THE STATE OF NORTH DAKOTA.

## GENERAL LANDSCAPING NOTES FOR ALL SHEETS

- ALL CONTRACTORS WISHING TO SUBMIT BIDS FOR THIS LANDSCAPING PROJECT SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL CONDITIONS.
- PROTECT THE IMPROVEMENTS ON SITE AND ON THE ADJOINING PROPERTIES. PROVIDE BARRICADES, COVERINGS OR OTHER TYPE OF PROTECTION AS NECESSARY TO PREVENT DAMAGE AND TO SAFEGUARD AGAINST INJURY TO EXISTING UTILITIES.
- DAMAGE THAT OCCURS TO PLANTS DURING TRANSPORTATION AND INSTALLATION WILL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.
- ALL PLANTING BEDS SHALL BE INSTALLED WITH 3" OF 2" CRUSHED ROCK MULCH. LANDSCAPE FABRIC WITH A MINIMUM WEIGHT OF 4 OZ./SQ. YD. AND WHEREVER NECESSARY, 6" POURED IN PLACE CONCRETE EDGING TO CONTAIN THE PLANTING BED.
- ALL LANDSCAPE PLANTINGS ARE TO BE WATERED BY THE LANDSCAPE CONTRACTOR THE SAME DAY THAT THE PLANTING OCCURS. IF WATER IS NOT AVAILABLE AT THE BUILDING, THE LANDSCAPE CONTRACTOR SHALL PROVIDE ALTERNATIVE METHODS FOR WATERING.
- SOLITARY TREES DO NOT NEED TO BE EDGED AROUND, HOWEVER ORGANIC WOOD MULCH SHALL BE PLACED AROUND THE TREE IN A MUFFLE RING THAT CONFORMS TO THE DETAIL PROVIDED FOR TREE PLANTINGS.
- CONTRACTOR SHALL PROVIDE WRITTEN WARRANTIES CONFIRMING THE FOLLOWING:
- FURNISHED TREES GUARANTEED TO LIVE AND REMAIN STRONG, VIGOROUS, AND HEALTHY CONDITION FOR 365 DAYS MINIMUM FROM DATE LANDSCAPE INSTALLATION IS ACCEPTED AS COMPLETED.

- LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING AND CARING FOR ALL PLANT MATERIAL, AND OTHER LANDSCAPING IMPROVEMENTS UNTIL THE DATE OF FINAL INSPECTION AND APPROVAL.

## TOPSOIL NOTES

- TOPSOIL IS STOCKPILED ON SITE AND WILL BE PLACED FOR THE LANDSCAPE CONTRACTOR TO SPREAD AND FINISH GRADE. ALL PORTIONS OF THE SITE NOT RECEIVING CONCRETE, CURB & GUTTER OR OTHER IMPROVEMENTS SHALL BE COVERED WITH A MINIMUM OF 6" OF TOPSOIL, AND SEEDING ACCORDING TO SPECIFICATIONS.
- TOPSOIL SHALL BE PLACED AND SEEDING AS SOON AS PRACTICAL TO MINIMIZE WIND AND WATER EROSION. BACKFILL BEHIND CURB AND GUTTERS AND SIDEWALK AS SOON AS REASONABLE TO PREVENT STANDING WATER AND PROTECT THE IMPROVEMENTS.

## SEEDING NOTES

- SEEDING SHALL CONFORM TO THE MOST RECENT VERSION OF THE CITY OF BISMARCK CONSTRUCTION SPECIFICATIONS FOR MUNICIPAL PUBLIC WORKS IMPROVEMENTS FOR SEEDING EXCEPT WHERE MODIFIED HEREIN.
- CLEAR AND GRUB SITE BEFORE SEEDING ENSURING THAT THE SITE IS IN A SMOOTH CONDITION WITH NO DEBRIS OR ROCKS LARGER THAN 2" IN DIAMETER.
- FERTILIZE SOIL DURING THE SEEDING PROCESS USING AN APPROPRIATE APPLICATION PROCESS. FERTILIZER SHALL BE 10-10-10 AND APPLIED AT A RATE OF 4 LBS. PER 1000 SQUARE FEET.
- SEED SHALL BE CLASS II FOR SUNNY AREAS PER CITY OF BISMARCK SPECIFICATIONS AND DRILL SEED TO A DEPTH OF 1/4" TO 1/2" AND SHALL BE EVENLY SPREAD. AFTER SEED HAS BEEN SOWN, THE SOIL SHALL BE REPAKED IMMEDIATELY AFTER THE SEED IS APPLIED TO FIRM THE SOIL AROUND THE SEED. NO SEED SHALL BE PLACED ON DAYS WHERE THE WIND IS STRONG ENOUGH TO PREVENT IT FROM BEING PROPERLY IMBEDDED INTO THE SOIL.
- SEED MUST SHOW A DENSITY OF 20 TO 30 SEEDLINGS PER SQUARE FOOT BEFORE ACCEPTANCE WILL OCCUR. THE CONTRACTOR SHALL FURNISH AND REPLACE WITHOUT ADDITIONAL COMPENSATION THEREFORE, ANY SEED FOR AREAS THAT HAVE NOT GERMINATED, HAVE DIED, OR ARE DAMAGED TO THE EXTENT THAT REPLACEMENT IS REQUIRED TO CONFORM TO THE REQUIREMENTS OUTLINED ABOVE. THE CONTRACT WARRANTY PERIOD SHALL ALSO APPLY TO THIS ITEM.
- CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR ANY EROSION SCARS OR WASHOUTS UNTIL THE DATE THAT FINAL SEED STAND IS ACCEPTED. SEE EROSION CONTROL PLAN FOR EROSION CONTROL METHODS.
- ALL PORTIONS OF THE SITE THAT ARE TO BE SEEDING SHALL BE HYDROMULCHED. HYDROMULCH SHALL BE A WOOD CELLULOSE FIBER MULCH. MULCH SHALL BE FREE OF GERMINATION OR GROWTH INHIBITIVE SUBSTANCES, AS WELL AS ANY NOXIOUS WEED SEED. MULCH SHALL BE TREATED WITH A TACK AND FIBER TO ENHANCE SEED AND MULCH PLACEMENT AND ADHERENCE TO THE SOIL. THE HYDROMULCH SHALL BE APPLIED AT A RATE OF 2000 LBS./ACRE USING HYDRAULIC SPRAY EQUIPMENT.

## FENCING NOTES

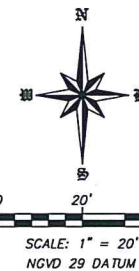
- A 6' HIGH ENCLOSURE WITH GATE OPENING TO THE NORTHWEST SHALL BE INSTALLED AROUND DUMPSTER PAD. SEE ARCHITECTURAL PLANS FOR ENCLOSURE DETAILS.

## LANDSCAPING REQUIREMENTS

REQUIRED INTERIOR LANDSCAPING:	PROVIDED INTERIOR LANDSCAPING:
520 SF	615 SF
8 SHRUBS	8 SHRUBS
3 SHADE TREES	3 SHADE TREES
REQUIRED STREET TREES:	PROVIDED STREET TREES:
TURNPIKE AVENUE (148 LF)	5 TREES
3 PER 100 FEET = 5 TREES	
CAPITOL AVENUE (212 LF)	PROVIDED STREET TREES:
3 PER 100 FEET = 7 TREES	7 TREES
REQUIRED PERIMETER PARKING:	PROVIDED PERIMETER PARKING:
TURNPIKE AVENUE	1 TREE AND 4 SHRUBS
1 TREE AND 4 SHRUBS	
CAPITOL AVENUE	PROVIDED PERIMETER PARKING:
3 TREES AND 14 SHRUBS	3 TREES AND 14 SHRUBS

## PLANT PALETTE

	SYM.	COMMON NAME	SCIENTIFIC NAME	SIZE	QTY.
TREES	HL	HONEYLOCUST	Gleditsia triacanthos	1-1/2" Cal.	8
	LL	LITTLE LEAF LINDEN	Tilia cordata	1-1/2" Cal.	7
	SS	SPRING SNOW CRABAPPLE	Malus 'Spring Snow'	1-1/2" Cal.	1
SHRUBS	MC	MAGIC CARPET SPIREA	Spiraea japonica 'Magic Carpet'	2 Gallon	13
	NF	NEON FLASH SPIREA	Spiraea japonica 'Neon Flash'	2 Gallon	13
	TE	TECHNY GLOBE ARBOVITAE	Thuja occidentalis 'Techny Globe'	2 Gallon	21



FOR REGULATORY  
REVIEW ONLY  
- NOT FOR  
CONSTRUCTION

REVISIONS		
MARK	DATE	DESCRIPTION
	05-01-18	ADDITIONAL LANDSCAPING

## Construction Documents

April 23, 2018  
J2 Project No. J21714

Hollevoet Orthodontics Office Building

SWENSON, HAGEN & COMPANY P.C.  
CONSULTING ENGINEERS  
300 Basin Avenue  
Bismarck, North Dakota 58504  
Phone (701) 255-1622

J2  
studio  
architecture + design pc

925 Basin Avenue, Suite #5  
Bismarck, ND 58504  
(701) 255-1622

© 2018 All Rights Reserved

Landscape Plan

C5.0